Mechanical and Industrial Engineering Syllabi NJIT Syllabi

Fall 2023

IE 673-851, 853: Total Quality Management

Cowander Gillespie

Recommended Citation

Total Quality Management/IE673 Syllabus
FALL 2023

Course Modality:

This is an online course, which will be conducted fully online, asynchronously via Canvas. For more information on using Canvas and other supported learning tools, visit the IST Service Desk [Knowledgebase](#).

Instructor Information

Instructor	Email	Office Hours
Cowander Gillespie	cmg3@njit.edu	Instructor office location (e.g., Webex) and office hour times, if applicable.

*I will respond to all emails/Inbox messages within 48 hours. Quizzes, homework, and discussions will be graded weekly.

General Information
Course Description

IE 673Total Quality Management. 3 credits, 3 contact hours.
Introduces the concept of total quality management as applicable to industrial systems. Presents methods for product quality improvement. Emphasis is on prevention through quality engineering and design and goes beyond traditional statistical process quality control. Presentation of recent methods in supplier management, quality assurance, process control, and competitor analysis. Includes Taguchi methods and quality function deployment. Description of ISO 9000 and Baldridge Award.

Prerequisites/Co-requisites
None

Course Learning Outcomes

By the end of the course, students will be able to:

1. Engage in group work using the total quality approach to quality management (TQM).
2. Interpret some fundamental concepts of quality and global competitiveness, strategic quality management.
3. Critique fundamentals of quality management, social networking for quality, quality ethics, corporate responsibility, quality culture, and customer satisfaction.
4. Apply fundamentals of employee empowerment, quality leadership and change, teambuilding, effective communication, quality education and training methods.
5. Present on the fundamentals of ISO 9000, and related international quality standards, quality tools, quality problem solving and decisions, the fundamentals of quality function deployment (QFD).
6. Analyze modern quality methods, tools and technologies, including prevention techniques, waste reduction, lean six-sigma (LSS), and other statistical methods, as well as how to document their work on the web (in digital documents they create and control).

Required Materials

David L. Goetsch and Stanley Davis: Quality Management for Organizational Excellence; Introduction to Total Quality, by Pearson Publ., 9 ED
ISBN: 9780137848249

Students will be required to use the Microsoft Office Suite.

Grading Policy

NJIT Grading Legend

Final Grade Calculation

Final grades for all assignments will be based on the following percentages:

Case Studies	30%
Discussion Forums	30%
Homework	30%
Project	10%

Course Work

Discussion Forums: (30% of grade) You are expected to participate in weekly discussion forums in Canvas. When all students participate in a discussion, it creates an active learning environment that will help you better understand the materials and be more

successful in the class. You will post your initial response to the prompt by Fridays at 11:59pm and respond to two classmates by Sunday at 11:59pm of the week they are listed.

Homework: (30% of grade) Assignments will be given weekly to give you an opportunity to apply course concepts for that week. Similar to quizzes, these activities are designed to help you practice and prepare for the projects.

Projects: (10% of grade) The project will require students, in their already assigned discussion and presentation groups, to come up with a company and a Total Quality Management System that would include their vision, mission statement, value, criteria of production, feedback from customers, product line and more.

Case Study Presentations: (30% of grade) Biweekly group PowerPoint presentations analyzing and summarizing specific case studies provided.

Feedback

I will deliver feedback on each assignment using the comments feature in Canvas.

Letter to Number Grade Conversions

A	90-100
B+	85-89
B	80-84
C+	75-79
C	70-74
D	65-69
F	0-64

Policy for Late Work
Late work will be accepted on an individual basis. Please email the professor directly.

Academic Integrity

"Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the NJIT academic code of integrity policy.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu"

Netiquette
Throughout this course, you are expected to be courteous and respectful to classmates by being polite, active participants. You should respond to discussion forum assignments in a timely manner so that your classmates have adequate time to respond to your posts. Please respect opinions, even those that differ from your own, and avoid using profanity or offensive language.

Weekly Expectations
This course is organized by weekly modules. Each week, students must watch a lecture video, complete a reading assignment, and participate in a class discussion forum by Sunday at 11:59pm.

Course Schedule

Week	Topic	Reading/Assignment	Due Dates
1	The Total Quality Approach to Quality Management, achieving Organizational Excellence	Posted Noted- Self Introductions and Expectations Module 1 Discussion Homework Assignment Chapter 1	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework: Sunday by 11:59pm
2	Quality and Global Competitiveness	Chapter 2 Module 2 Discussion Homework Assignment Chapter 2	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm

		Module 2 Case Study Presentation	Homework and Case Study Presentation: Sunday by 11:59pm
3	Strategic Management, Planning and Excellence	Chapter 3 Module 3 Discussion Homework Assignment Chapter 3	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework: Sunday by 11:59pm
4	Quality Management and Ethics	Chapter 4 Module 4 Discussion Homework Assignment Chapter 4 Module 4 Case Study Presentation	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework and Case Study Presentation: Sunday by 11:59pm
5	Partnering and Strategic Alliances Excellence	Chapter 5 Module 5 Discussion Homework Assignment Chapter 5	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework: Sunday by 11:59pm
6	Quality Culture and Attitudes	Chapter 6 Module 6 Discussion Homework Assignment Chapter 6 Module 6 Case Study Presentation	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework and Case Study Presentation: Sunday by 11:59pm
7	Customer Satisfactions and Employee Empowerment	Chapter 7 & 8 Module 7 & 8 Discussion Homework Assignment Chapter 7 & 8	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm

			Homework: Sunday by 11:59pm
8	Leadership and Change	Chapter 9 Module 9 Discussion Homework Assignment Chapter 9 Module 9 Case Study Presentation	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework and Case Study Presentation: Sunday by 11:59pm
9	Team Building and Teamwork	Chapter 10 Module 10 Discussion Homework Assignment Chapter 10	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework: Sunday by 11:59pm
10	Effective Communication Works	Chapter 11 Module 11 Discussion Homework Assignment Chapter 11 Module 11 Case Study Presentation	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework and Case Study Presentation: Sunday by 11:59pm
11	Education and Training Workers	Chapter 12 Module 12 Discussion Homework Assignment Chapter 12	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework: Sunday by 11:59pm
12	Overcoming Politics and Conflict in the Workplace	Chapter 13 Module 13 Discussion Homework Assignment Chapter 13	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework and Case Study

			Presentation: Sunday by 11:59pm
		Module 13 Case Study Presentation	
13	ISO 9000 and Total Quality	Chapter 14 & 15 Module 14 & 15 Discussion Homework Assignment Chapter 14 & 15	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework: Sunday by 11:59pm
14	Continual Improvement Methods with Six Sigma, Lean, Lean Six Sigma and More	Chapter 19 Module 19 Discussion Homework Assignment Chapter 19 Module 19 Case Study Presentation	Initial Discussion Post: Friday by 11:59pm Peer Responses: Sunday by 11:59pm Homework and Case Study Presentation: Sunday by 11:59pm
15		FINAL PROJECT SUBMISSION	

Additional Information and Resources

Accessibility:
This course is offered through an accessible learning management system. For more information, please refer to Canvas's [Accessibility Statement](#).

Requesting Accommodations:

The Office of Accessibility Resources and Services works in partnership with administrators, faculty, and staff to provide reasonable accommodations and support services for students with disabilities who have provided their office with medical documentation to receive services.

If you need accommodations due to a disability, please contact the [Office of Accessibility Resources and Services](#) to discuss your specific needs.

Resources for NJIT Online Students

NJIT is committed to student excellence. To ensure your success in this course and your program, the university offers a range of academic support centers and services. To learn more, please review these Resources for NJIT Online Students, which include information related to technical support.